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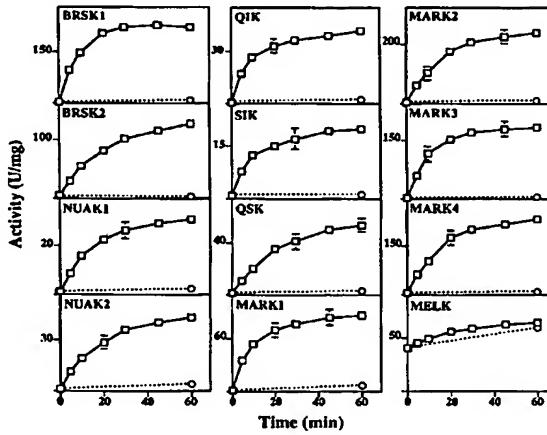
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(54) Title: METHODS



(57) Abstract: A method for identifying a compound for use in modulating, for example promoting, the activation or phosphorylation of AMPK (AMP-activated protein kinase) or AMPK subfamily member in a cell, the method comprising the steps of (1) determining whether a test compound modulates, for example promotes, the protein kinase activity of LKB1 and (2) selecting a compound which modulates, for example promotes, the protein kinase activity of LKB1. The protein kinase activity may be tested using AMPK or an AMPK subfamily member, or a peptide encompassing the T-loop region of AMPK or an AMPK subfamily member. The LKB1 may be in a preparation or complex with STRAD and/or M025, which has much greater kinase activity than LKB1 in the absence of these accessory proteins. The LKB1, STRAD or M025 may be recombinant. The AMPK subfamily member may be AMPK $\alpha$ 1, AMPK $\alpha$ 2, NUAK1, NUAK2, BRSK1, BRSK2, SIK, QIK, QSK, MARK1, MARK2, MARK3, MARK4 or MELK.



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